

# Chapter 9 - Assignment 2

Name \_\_\_\_\_

Class Period \_\_\_\_\_

Date \_\_\_\_\_

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1. What is common to all organic compounds?

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2. Describe the composition of the simplest organic compounds.

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3. List three carbon containing compounds that are not considered organic compounds.

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4. What percentage of all known compounds contain carbon?

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5. What type of bond do carbon atoms form with other carbon atoms?

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6. Describe a carbon "single bond".

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7. Describe a carbon "double bond".

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8. Describe a carbon "triple bond".

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9. Draw the electron dot diagram for two carbon atoms joined by a single bond.

10. What is the name given to the group (series) of hydrocarbons that have single covalent bonds between carbon atoms?

11. Draw the electron dot diagram for two carbon atoms joined by a double bond.

12. What is the name given to the group (series) of hydrocarbons that have at least one double covalent bond between two carbon atoms?

13. Draw the electron dot diagram for two carbon atoms joined by a triple bond.

14. What is the name given to the group (series) of hydrocarbons that have at least one triple covalent bond between two carbon atoms?

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15. What does a molecular formula indicate?

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16. What does a structural formula indicate?

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17. In structural formulas, what does a single dash (-) between element symbols represent?

18. *Fill in the missing information in the following chart.*

Compound Name	Molecular Formula	Structural Formula
	$C_3H_8$	
	$CH_4$	
butane		
octane	$C_8H_{??}$	
ethyne (acetylene)		

19. How can *organic acid* formulas be recognized?

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20. *Fill in the missing information in the following chart.*

Name	Molecular Formula	Use? Found where? Other info?
benzene	$C_6H_6$	
methanol	$CH_3OH$	
	$C_2H_5OH$	
	$HCOOH$	
	$CCl_2F_2$	
	$C_{12}H_{22}O_{11}$	

21. What elements are found in *carbohydrates*?

22. What are the only two groups of substances that are classified as *carbohydrates*?